

Date: Friday, 14/07/2006 12:27:48 PM  
User: Linda Lacelle

## Process Sheet

Customer : CC-DAR01 Dart Aerospace Ltd. Drawing Name : D058-676-201  
Job Number : 27926  
Estimate Number : 10804  
P.O. Number : *N/A*  
This Issue : 14/07/2006 S.O. No. : *N/A*  
Prsht Rev. : NC Part Number : Z\_CUSTOM  
First Issue : *N/A* Type : *N/A* Drawing Number : NCR066  
Previous Run : 00015 Drawing Revision : *N/A*  
Material : *N/A*  
Due Date : 20/08/2006 Qty: 1 Um: Each  
Written By : \_\_\_\_\_  
Checked & Approved By : \_\_\_\_\_  
Comment : \_\_\_\_\_

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

REMOVE FROM FINISHED GOOS AND RED TAG  
REF: NCR 066

*19/2/0*



*(1)*

2.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

DISASSEMBLE SUPPORTS; CLAMPS AND ABRASION STRIP  
(D2891-1; MS21920-20; D2856-400-694)

*10/10/23*



*(1)*

3.0 SPRAY PAINTING SPRAY PAINTING



Comment: SPRAY PAINTING  
STRIP ALL PAINT

*10/10/23*



*(1)*

4.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*10/10/23*



5.0 OUTSIDE SERVICE OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

ISSUE P.O.  
LIQUID PENETRANT INSPECT PER QSI 038  
LPI PER ASTM 1417 LEVEL 2

*10/10/23*



DART		TRANS-PORT-CANADA APPROVAL 409-89	
PN	D058-676-201	QC	CHG001
DESC	Cross tube Aft High	STC	SR01018SE
LOT	B19628	STC	
MODEL	OH-58A+/AC	STC	
MADE IN CANADA		TEL: 1-800-332-3339 FAX: 1-800-332-3339	

Date: Friday, 14/07/2006 12:27:49 PM  
User: Linda Lacelle

## Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: D058-676-201

Job Number: 27926

Part Number: Z\_CUSTOM

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

RECEIVE AND INSPECT FOR TRANSIT DAMAGE & *06/11/03*

ATTACH COPY OF NDT RESULTS TO W/O

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

RETURN TO ORIGINAL W/O 19628

REASSEMBLE ; REPAINT ; REPACKAGE *ml 06.11.06* *①*

8.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

INSPECT LEVEL 21 *①*

Job Completion



*C.I Level 6*

*EE 06.11.03*

*12 06.11.21*

45

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	19628
<b>Description:</b> OH-58 AFT Crosstube Assembly		<b>Part Number:</b>	D058-676-201
<b>Drawing:</b> D058-676-241 rev. A 2		<b>Qty:</b>	1
		Page 1 of 2	

Step	Location	Procedure	By	Date	Qty
1	EXPEDITING	Issue W/O <i>Dwg. not required</i>	<i>KJ</i>	03.09.11	1
2	EXPEDITING	Photocopy blue file and type labels per PPP D058-676-201 <i>WK 43 KJ</i>			
3	CNC CELL	Material: Check OD = 2.250" ; ID = 1.550" Qty Part number Description batch 1 D6007-106 Crosstube <i>B15933</i>	<i>EF</i>	03/10/12	1
4	CNC CELL	Fill tube with sand & install plugs DT8534 on both ends as per folio FA086	<i>EF</i>	03/10/12	1
5	CNC CELL	Turn first side as per folio FA086	<i>EF</i>	03/10/12	1
6	METAL	Deburr & Inspect for surface damage. Repair damage within limits per D058-676-241.	<i>EF</i>	03/10/13	1
7	QC	Inspect Level 1	<i>EF</i>	03/10/13	1
8	CNC CELL	Turn second side as per folio FA086	<i>EF</i>	03/10/16	1
9	METAL	Deburr & Inspect for surface damage. Repair damage within limits per D058-676-241	<i>EF</i>	03/10/16	1
10A	QC	Inspect Level 1	<i>EF</i>	03/10/16	1
10B	QC8	INSPECT DIMENSIONS FOR SECOND CHECK	<i>EF</i>	03/10/16	1
11	CNC CELL	Polish entire outside surface of crosstube	<i>EF</i>	03/10/16	1
12	CNC CELL	Remove sand and plugs	<i>EF</i>	03/10/16	1
13	METAL	Scribe part # and batch # using vibrating stylus as per dwg D058-676-241	<i>EF</i>	03/10/16	1
14	FINISHING	Chemical Conversion Coat per QSI 005 4.1 within 24 hours of machining	<i>MM</i>	03-10-07	1
15	QC	Inspect Level 5	<i>DP</i>	05-12-14	1
16	METAL	Bend tube as per dwg D058-676-241 using CNC bender program OH58-af	<i>DP</i>	05-12-14	1
17	QC	Inspect Level 6	<i>2</i>	05-12-14	1
18	METAL	Drill pilot holes in tube as per dwg using drill jig DT8541 & DT8542	<i>BT</i>	06-06-02	1
19	METAL	Ream hole to finish size in tube as per dwg D058-676-241 using drill jig DT8541 & DT8542	<i>BT</i>	06-06-02	1
20	METAL	Deburr & Inspect for surface damage. Repair damage within limits per D058-676-241	<i>Amc</i>	06-06-06	1
21	FINISHING	Chemical conversion coat per QSI 005 4.1 within 24 hours of bending and drilling	<i>BT</i>	06-06-06	1
22	QC	Inspect Level 5			
23	QC	Liquid Penetrant Inspect per QSI 038 Or Issue P/O: LPI per ASTM 1417 Level 2 Attach copy of NDT results to W/O			
24	RECEIVING	Inspect for transit damage & attach copy of NDT results to W/O			

RF  
05.28

RF  
03.09.16

RELEASED

21/11/12  
03.01.12

Work Order:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Manuf / Design Mgr	Approval QC Inspector

NCR		WORK ORDER NON-CONFORMANCE						
DATE	STEP	Description of NC section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial					

PAR#: \_\_\_\_\_ Fault Category: \_\_\_\_\_ DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries  
H:\Admin-QA\ISO\forms\w\oncB.doc

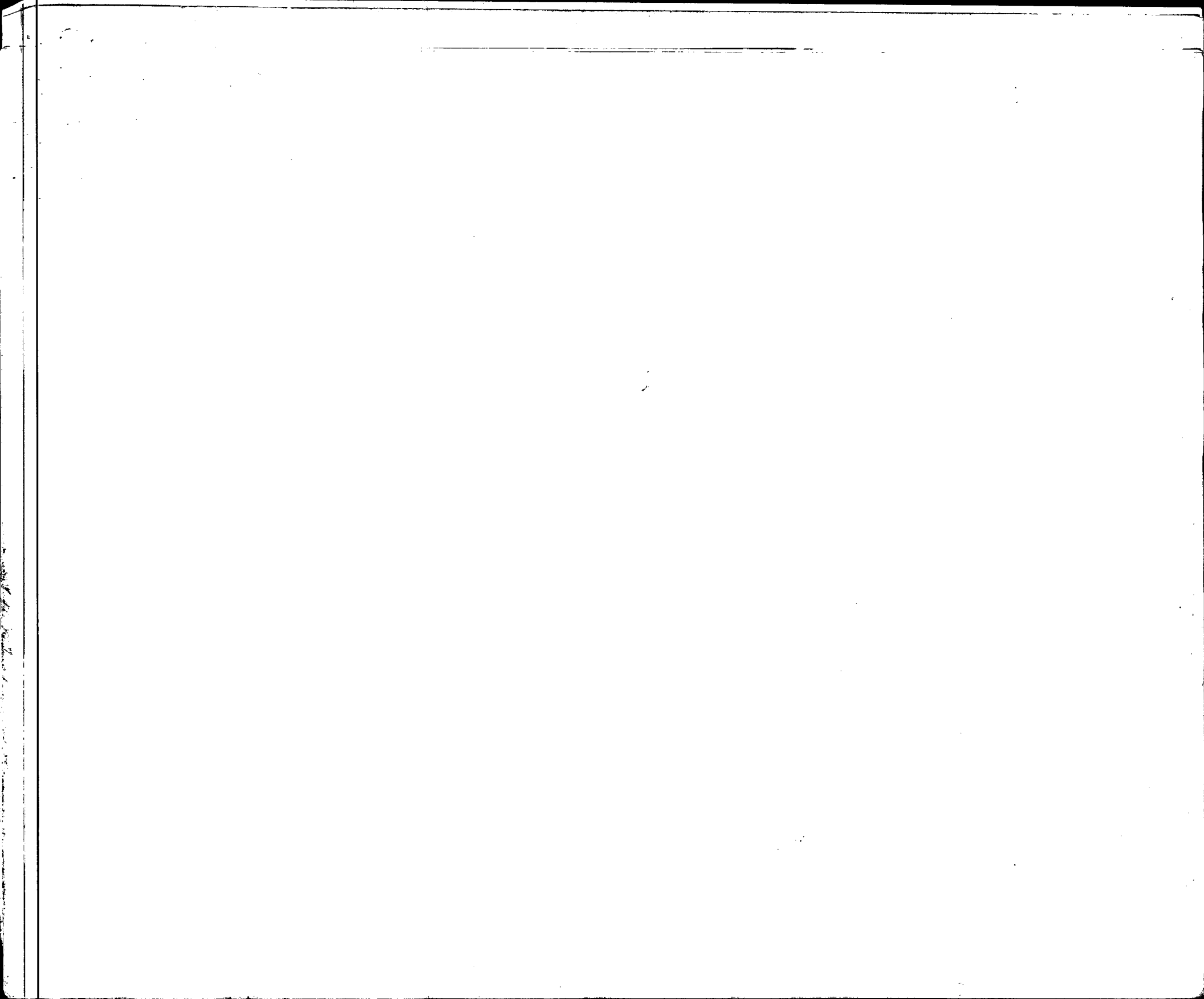
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	19628
<b>Description:</b> OH-58 Aft Crosstube Assembly	<b>Part Number:</b>	D058-676-201
<b>Drawing:</b> D058-676-241 rev.A	<b>Qty:</b>	1
		Page 2 of 2

Step	Location	Procedure	By	Date	Qty																
25	QC	Inspect for damage & ensure results are per dwg D206-676-241																			
26	COMPOSITE	Prime inside and outside per QSI 005 4.2	FC	06/11/06	①																
27	COMPOSITE	Paint outside with white Imron per QSI 005 4.2																			
28	QC	Inspect Level 14																			
29	STORES	Pick:																			
		<table border="1"> <thead> <tr> <th>Qty</th><th>Part-number</th><th>Description</th><th>batch</th></tr> </thead> <tbody> <tr> <td>2</td><td>D2856-400-694</td><td>abrasion strip</td><td>B23545</td></tr> <tr> <td>2</td><td>D2891-1</td><td>support</td><td>B19647</td></tr> <tr> <td>4</td><td>MS21920-20</td><td>clamp</td><td>M3796</td></tr> </tbody> </table>	Qty	Part-number	Description	batch	2	D2856-400-694	abrasion strip	B23545	2	D2891-1	support	B19647	4	MS21920-20	clamp	M3796	JS	06-07-12	①
Qty	Part-number	Description	batch																		
2	D2856-400-694	abrasion strip	B23545																		
2	D2891-1	support	B19647																		
4	MS21920-20	clamp	M3796																		
30	METAL	Install abrasion strips per QSI 035 Locate strips using DT8579	JS	06-07-12	①																
31	METAL	Install supports and clamps per D058-676-241. Torque clamps to 80-100 in lb.	JS	06-07-12	①																
32	QC	Inspect Level 5	DD	06-7-13	1																
32	STORES	Pick:																			
		<table border="1"> <thead> <tr> <th>Qty</th><th>Part number</th><th>Description</th><th>batch</th></tr> </thead> <tbody> <tr> <td>4</td><td>AN5-32A</td><td>bolt</td><td>M101021</td></tr> <tr> <td>4</td><td>MS21042L5</td><td>nut (or MS21042-5)</td><td>M17694</td></tr> <tr> <td>8</td><td>AN960JD516</td><td>washer</td><td>M19185</td></tr> </tbody> </table>	Qty	Part number	Description	batch	4	AN5-32A	bolt	M101021	4	MS21042L5	nut (or MS21042-5)	M17694	8	AN960JD516	washer	M19185	JS	06/07/13	①
Qty	Part number	Description	batch																		
4	AN5-32A	bolt	M101021																		
4	MS21042L5	nut (or MS21042-5)	M17694																		
8	AN960JD516	washer	M19185																		
33	QC	Inspect Level 4																			
34	STORES	Package per PPP D058-676-201																			
35	EXPEDITING	Close W/O Inspect level 21 Cost / Part:																			

Rev	Date	Change	Revised By	Approved
A	00.11.21	New Issue	EC	
B	01.02.07	Combined 676-201 & 676-241	EC	
C	01.08.08	Reformat	SM	
D	01.10.01	Added tool #'s & Imron paint	SM	

RELEASED  
06/11/12



# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Nov 08, 2005  
10:02 am

Work Order No : 0019628  
Project Name : \*D058-676-201  
Project For : WK345  
Work Order Type : Main  
Main WO Number :  
House Part Number : \*D058-676-201  
Description : Crosstube Installation  
Manufactured : Yes  
Amount Req'd : 1  
Amount Done : 0  
Start Date : 09-11-03  
~~Est Finish Date : 11-07-03~~  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
  
Order Entry No :  
OE Value : 0.00  
  
Est Margin : 0.000%  
Actual Margin : 0.000%  
  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	5.25	100.00		
Production Cost :	0.00	92.28	100.00	0.00	92.28
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	10.50	100.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	92.28	100.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	92.28			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	( -92.28)

MIS OK  
11-11

Date: Saturday, 11/5/2005 11:17:04 AM  
User: Linda Lacelle

**Process Sheet**

<b>Customer</b> : CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> : OH-58 AFT X-TUBE ASSEMBLY
<b>Job Number</b> : 19628	
<b>Estimate Number</b> : 10246	
<b>P.O. Number</b> :	<b>Part Number</b> : D058676201
<b>This Issue</b> : 11/5/2005 <b>S.O. No.</b> :	<b>Drawing Number</b> : D058-676-241 REV A2
<b>Prsht Rev.</b> : NC	<b>Project Number</b> :
<b>First Issue</b> : / / <b>Type</b> : LANDING GEAR	<b>Drawing Revision</b> : A2
<b>Previous Run</b> : 19627	<b>Material</b> :
<b>Written By</b> :	<b>Due Date</b> : 11/30/2005 <b>Qty:</b> 1 <b>Um:</b> Each
<b>Checked &amp; Approved By</b> :	
<b>Comment</b> : Est Rev:E 04.02.16    Reformat    KJ/DS	

**Additional Product**

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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1.0	DC	DOCUMENT CONTROL
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**Comment:** DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D058-676-201CHG001

2.0	D6007106	Crosstube
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3.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
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**Comment:** MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA086

2-Turn first side as per Folio FA086

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D058-676-241.

4.0	QC1	INSPECT ALL DIM TO DIM SHEET
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**Comment:** INSPECT ALL DIM TO DIM SHEET

5.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
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**Comment:** MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA086

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D058-676-241.



Date: Saturday, 11/5/2005 11:17:05 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 AFT X-TUBE ASSEMBLY

Job Number: 19628

Part Number: D058676201

Job Number:



Seq. #:	Machine Or Operation:	Description :
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6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

8.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Polish entire outside surface of crosstube

2-Remove sand and plugs

3-Scribe part # and batch # using vibrating stylus as per Dwg D058-676-241

9.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1 within 24 hours of machining

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

11.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per Dwg D058-676-241 using CNC bender program OH58-af and Folio FT

12.0

QC6

DIMENSIONAL CHECK



Comment: Inspect dimensions and work To Current Step

13.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube as per Dwg D058-676-241 using drill Jig DT8541 & DT8542

Date: Saturday, 11/5/2005 11:17:05 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 AFT X-TUBE ASSEMBLY

Job Number: 19628

Part Number: D058676201

Job Number:



Seq. #:

Machine Or Operation:

Description :

2-Ream hole to finish size in tube as per Dwg D058-676-241 using drill Jig DT8541 & DT8542. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D058-676-241

14.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1 within 24 hours of bending and drilling

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

16.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 0380

Issue P/O: \_\_\_\_\_

LPI as per ASTM 1417 Level 2

Attach copy of NDT results to work order

17.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage Ensure copy of NDT results attached to work order.

18.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D058-676-241

19.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

FC 06 07 06 ①  
M 06 07 11 ①

Date: Friday, 10/11/2006 7:22:26 AM  
 User: Linda Lacelle

## Process Sheet

<b>Customer</b>	: CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b>	: OH-58 AFT X-TUBE ASSEMBLY
<b>Job Number</b>	: 19628		
<b>Estimate Number</b>	: 10246		
<b>P.O. Number</b>	:	<b>Part Number</b>	: D058676201
<b>This Issue</b>	: 10/11/2006	<b>S.O. No.</b>	:
<b>Prsht Rev.</b>	: NC	<b>Drawing Number</b>	: D058-676-241 REV A2
<b>First Issue</b>	: 05/11/2005	<b>Project Number</b>	:
<b>Previous Run</b>	: 19627	<b>Drawing Revision</b>	: A2
		<b>Material</b>	:
<b>Written By</b>	:	<b>Due Date</b>	: 31/03/2006
<b>Checked &amp; Approved By</b>	:	<b>Qty:</b>	1 Um: Each
<b>Comment</b>	: Est Rev:E 04.02.16 Reformat KJ/DS		

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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20.0	QC14	Inspect Spray Paint
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**Comment:** Inspect Spray Paint  
 Then, Wrap in plastic bag to protect from scratches

21.0	D2856400	Abrasion Strip
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**Comment:** Qty.: 0.5780 f(s)/Unit Total : 0.5780 f(s)

Pick:

Qty Part number	Description	Batch
2 D2856-400-694	Abrasion Strip	628258 25 06-11-09

22.0	D28911	Support 2.25 dia
------	--------	------------------



**Comment:** Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number	Description	Batch
2 D2891-1	Support	626715 25 06-11-09

23.0	MS2192020	Clamp (per MIL-DTL-8783C)
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**Comment:** Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number	Description	Batch
4 MS21920-20	Clamp	M102440 25 06-11-09

Date: Friday, 10/11/2006 7:22:26 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 AFT X-TUBE ASSEMBLY

Job Number: 19628

Part Number: D058676201

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8579

2-Install supports and clamps as per Dwg D058-676-241. Torque clamps to 80-100 in lb.

25 06-11-10

25.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

26.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

27.0

AN532A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part number

Description Batch

4 AN5-32A

Bolt

28.0

AN960JD516

Washer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part number

Description Batch

8 AN960JD516

Washer

29.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part number

Description Batch

4 MS21042L5

Nut (or -5)

Date: Friday, 10/11/2006 7:22:26 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 AFT X-TUBE ASSEMBLY

Job Number: 19628

Part Number: D058676201

Job Number:



Seq. #:

Machine Or Operation:

Description :

30.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

31.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D058-676-201

Location: \_\_\_\_\_

32.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Job Completion



## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 AFT X-TUBE ASSEMBLY

Job Number: 19628

Part Number: D058676201

Job Number:



Seq. #:

Machine Or Operation:

Description :

20.0

QC14

Inspect Spray Paint



JUN 07 12 01

Comment: Inspect Spray Paint

Then, Wrap in plastic bag to protect from scratches

21.0

D2856400694

Abrasion Strip

B28258 85 06 11 09

22.0

D28911

Support 2.25 dia

B26715 85 06 11 09

23.0

MS2192020

Clamp

M102440 85 06 11 09

24.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8579

2-Install supports and clamps as per Dwg D058-676-241. Torque clamps to 80-100 in lb.

85 06-11-10

25.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

DP 6-11-13

26.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

27.0

AN532A

Bolt

40

28.0

AN960JD516

Washer

50

29.0

MS21042L5

Nut

40

30.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

10/6/17

31.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D058-676-201

Location:

REV A

10/6/17

## Process Sheet

**Customer:** CU-DAR001 Dart Helicopters Services

**Drawing Name:** OH-58 AFT X-TUBE ASSEMBLY

**Job Number:** 19628

**Part Number:** D058676201

Job Number:



**Seq. #:**

**Machine Or Operation:**

**Description :**

32.0

DC

DOCUMENT CONTROL



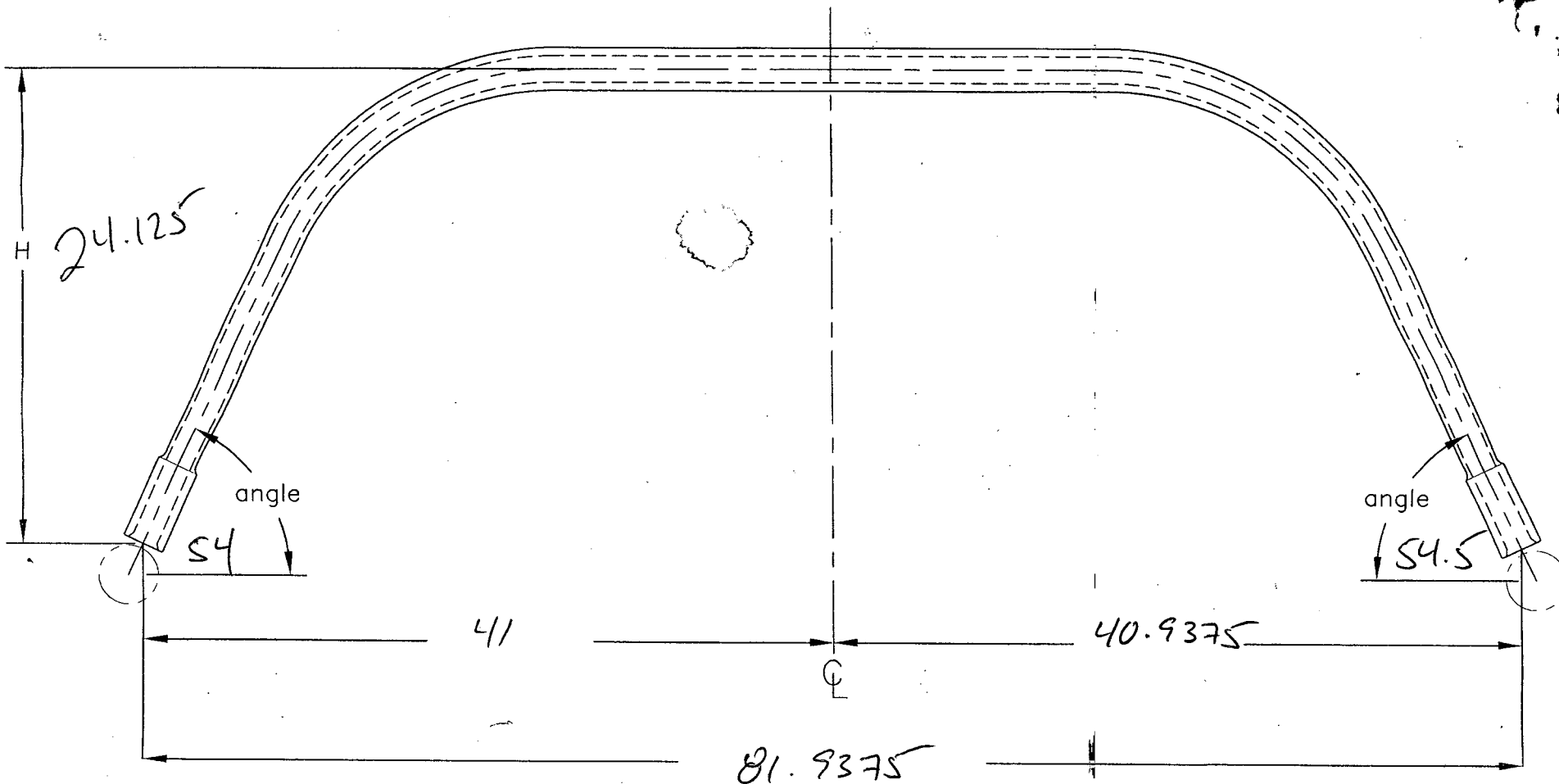
**Comment:** DOCUMENT CONTROL  
Inspection Level 21

Job Completion









DATE: 05.12.14

DESCRIPTION: 0058-676-201

BATCH NO: 19628

DRAWING: 0058-676-241 Rev. A2

H: 23.98 ± .060

1/2 SPAN: 40.92 ± .008

TOTAL SPAN: 81.84

ANGLE: 54 ± 2°

*2*  
05.12.14



**HeathAir**

INTERNATIONAL (1991) INC.

661 Ave. Lapine, Dorval, Québec H9P 1G3

Tél.: (514) 636-1000 • Fax: (514) 636-0031

W.O. N° 35172

A.M.O. Number: 46/90

**NON-DESTRUCTIVE TESTING REPORT****AIRCRAFT / COMPONENT INFORMATION**

REGISTRATION:

MODEL/TYPE:

SERIAL NUMBER:

TOTAL HR/LDG:

OPERATED BY:

BASED AT:

**INSPECTION REQUIREMENTS**

Carry out FPI of (6) cross tubes (external surface) as per ASTM E-1417-05 and the Dart QSI 038, Section 4.1.1 (on file at client) - parts delivered to HeathAir.

Qty (2) P/N D206-667-203 S/N's B28684 and B28685.

Qty (2) P/N D206-667-103 S/N's B28682 and B28683.

Qty (1) P/N D206-667-201 S/N B28883.

Qty (1) P/N D058-676-201 S/N B27926.

☐ RADIOGRAPHY☐ ULTRASONIC☒ PENETRANT☐ MAGNETIC PARTICLE☐ EDDY CURRENT**INSPECTION REPORT**

Fluorescent penetrant inspection was performed in accordance with the above requirements on (6) cross tubes.

Note: A Level 3 penetrant was substituted for the requested Level 2 (3 is more sensitive) Ardrex 970P25E Batch #04B503.

(6) cross tubes inspected. (6) PASSED / (0) FAILED.

THE MAINTENANCE DESCRIBED ABOVE HAS BEEN PERFORMED IN ACCORDANCE WITH  
THE APPLICABLE STANDARDS OF AIRWORTHINESS

INSPECTED BY: 

DATE November 2, 2006

INSPECTION  
STAMP(S) **CUSTOMER INFORMATION**

CUSTOMER: Dart Aerospace

P.O. NUMBER PO 00002404

ADDRESS:

CONTACT NAME: Linda Lacelle

LABOUR	Ⓢ	F. (613) 632-1053	Ⓢ
MATERIALS	Ⓢ		
TRAVEL EXPENSES	Ⓢ		GST
HOTEL EXPENSES	Ⓢ		PST

INVOICE NO.

TOTAL \$



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D058-676-241	REV. A SHEET 1 OF 3
DATE 00.11.17		TITLE CROSSTUBE ASS'Y (OH-58 HIGH AFT) NTS	
A	00.11.17	NEW ISSUE	

Qty	Part Number	Description
X	D058-676-241	CROSSTUBE ASSEMBLY (OH-58 HIGH AFT)
1	D6007-106	CROSSTUBE
2	D2856-400-694	ABRASION STRIP
2	D2891-1	SUPPORT
4	MS21920-20	CLAMP

#### GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6007-106  
FINISHED LENGTH = 103.51±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

**UNDER REVIEW**

06.10.13 PH

update view 0-0

**REFERENCE ONLY**

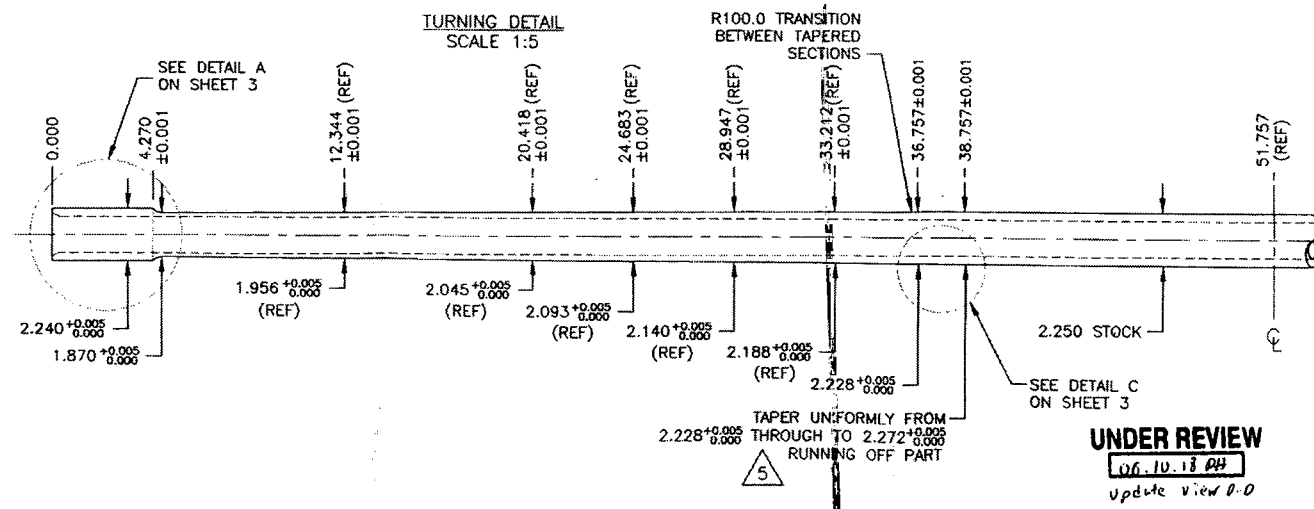
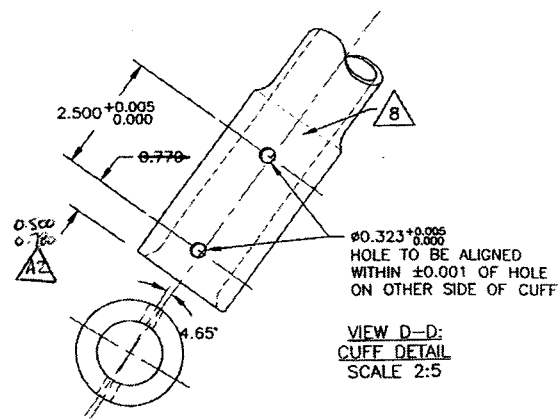
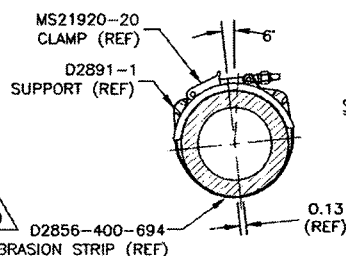
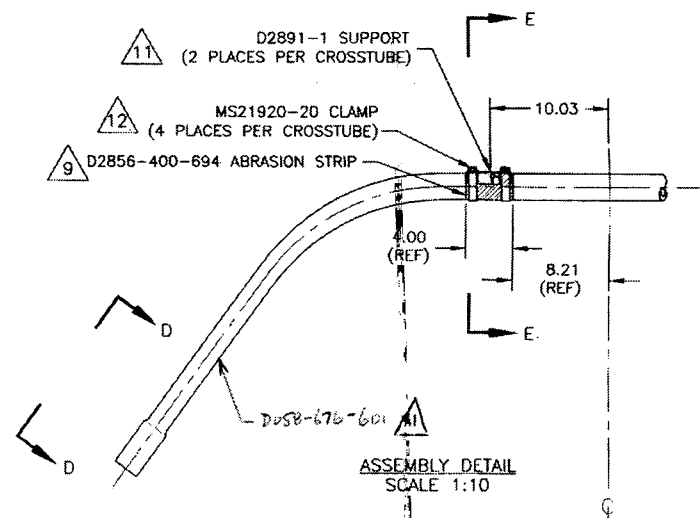
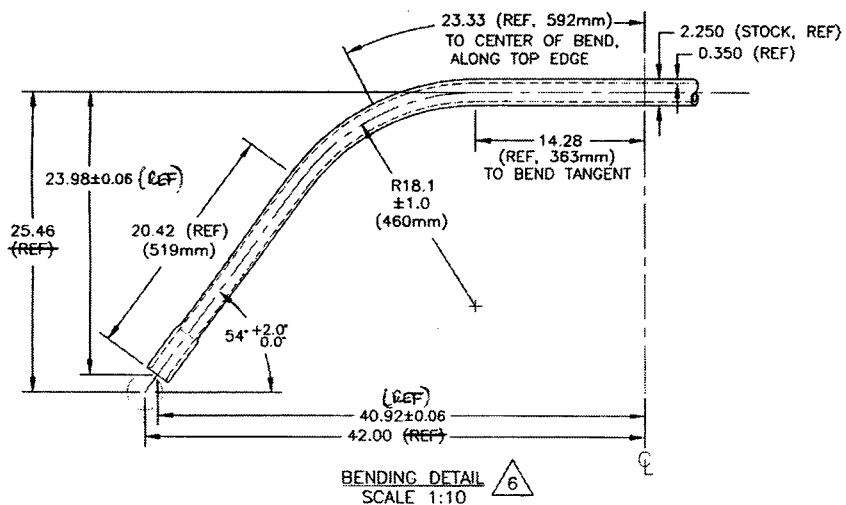
**RELEASED**  
00.11.24. PH

A2	01.07.16	UPDATE DIM TO FIRST HOLE	<i>[Signature]</i> CP
A1	01.03.07	ADD D058-676-601 P/N	<i>[Signature]</i> CP

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RELEASED  
00.11.24



UNDER REVIEW  
06.10.18 PH  
update view D-D

COPYRIGHT © 2000 BY DART AEROSPACE LTD.		DESIGN CP	DRAWN BY CP	<b>DART</b> DART AEROSPACE LTD. MARKHAM, ONTARIO, CANADA	REV. A SHEET 2 OF 3 SCALE
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		CHECKED #	APPROVED #		
DATE 00.11.17		TITLE CROSSTUBE ASS'Y (OH-58 HIGH AFT)			1:10